AMENDMENTS TO THE CLAIMS

Claims 1-20 (canceled)

21. (previously presented) An annular antenna apparatus comprising:

a toroidal body composed of a material having high electromagnetic permeability and the body having a through bore;

an electrical device coupled to the toroidal body;

a loop antenna disposed to extend axially through the through bore with clearance in direct magnetic coupled relationship with the toroidal body, the loop antenna comprising a continuous loop and having a configuration providing elongation capacity with which to counter externally originating strain forces imposed on the apparatus.

22. (previously presented) An apparatus according to claim 21, wherein the loop antenna is in mechanically de-coupled relationship with the toroidal body and is free to resiliently elongate without encumbrance from the toroidal body.

23. (previously presented) An apparatus according to claim 21 wherein the loop antenna lies substantially in a first plane that intersects the toroidal body opening at a substantially right angle.

24. (previously presented) An apparatus according to claim 21, wherein the electrical device comprises a transponder.

25. (previously presented) An apparatus according to claim 21, wherein the loop antenna comprises at least one wire.

26. (previously presented) An annular antenna apparatus comprising:

a toroidal body composed of a material having high electromagnetic permeability and the body having a through bore;

a transponder coupled to the toroidal body;

a continuous loop antenna disposed to extend axially through the through bore

with clearance in a magnetically coupled relationship and a mechanically de-coupled relationship with the toroidal body wherein the antenna is free to resiliently elongate without encumbrance from the toroidal body.

27. (previously presented) An apparatus according to claim 26, wherein the loop antenna lies substantially in a first plane that intersects the toroidal body opening at a substantially right angle.

28. (previously presented) An apparatus according to claim 26, wherein the loop antenna comprises at least one wire formed into a substantially sinusoidal wave conformation.

29. (previously presented) An apparatus according to claim 26, wherein the transponder and the toroidal body reside within a common housing.

30. (previously presented) In an annular antenna apparatus of the type comprising a toroidal body composed of material having high electromagnetic permeability and the body having a through bore; a transponder coupled to the toroidal body, and a loop antenna magnetically coupled to the transponder through the toroidal body, characterized in that the loop antenna is a continuous loop that extends axially through the central opening with clearance in a non-contacting and mechanically decoupled relationship with the toroidal body and the antenna is configured to resiliently elongate responsive to external forces applied to the antenna apparatus without encumbrance from the toroidal body.

31. (previously presented) An apparatus according to claim 30, wherein the loop antenna lies within a first plane normally disposed to the toroidal body through bore.

32. (previously presented) An apparatus according to claim 30, wherein the loop antenna is in direct magnetically coupled relationship and mechanically de-coupled relationship with the toroidal body.

33. (previously presented) An apparatus according to claim 30, further characterized as including a housing in which the toroidal body and the transponder commonly reside.

34. (currently amended) A method of associating a loop antenna with an electronic device through a toroidal body composed of a material of high elector-magnetic permeability and the body having a through bore, comprising the steps of:

forming the antenna as a continuous loop capable of axial elongation in response to external forces exerted on the antenna;

positioning the loop antenna to project axially through the through bore with clearance in non-contacting and mechanically decoupled relationship with the toroidal body such that the antenna is free to resiliently elongate without encumbrance from the toroidal body;

establishing a direct magnetic coupling between the loop antenna and the toroidal body; and coupling the electronic device to the antenna through the toroidal body.

35. (previously presented) A method as set forth in claim 34, further comprising the step of orienting the loop antenna to lie within a first plane normally disposed to the toroidal body through bore.

36. (previously presented) A method according to claim 34, further comprising the step of locating the toroidal body and the electronic device within a common housing.

37. (previously presented) A method of associating a loop antenna with an electronic device through a toroidal body composed of a material of high electromagnetic permeability and the body having a central opening, comprising the steps of:

establishing a magnetic coupling between the loop antenna and the toroidal body;

coupling the electronic device to the antenna through the toroidal body;

embedding at least a portion of the antenna loop and at least a portion of the electronic device in an electrically non-conductive encapsulant material to maintain the antenna loop and the toroidal body in a specified orientation.

38. (previously presented) A method according to claim 37, further comprising the step of extending the antenna through the toroidal body through bore in a mechanically de-coupled relationship therewith.

39. (previously presented) A method according to claim 38, further comprising the steps of:

positioning the toroidal body in an orientation in which the antenna intersects the through bore at substantially a right angle; and

employing the encapsulant material to maintain the toroidal body in said orientation.

40. (previously presented) A method according to claim 37, further comprising the step of employing the encapsulant material to render the toroidal body and the electronic device unitarily transportable.

The above amendments are supported by the original specification.